

REMARKS

Claims 1-18 were previously pending in this application.

Claims 1-6 stand withdrawn as non-elected responsive to a restriction requirement and are hereby cancelled without prejudice for presentation in a divisional application.

Claims 7-18 are rejected.

Claims 7, 9, 11-13, and 17-18 are rejected under 35 U.S.C. 103(a).

Claims 8 and 14-16 are rejected under 35 U.S.C. 103(a).

Claim 7 is amended.

New claim 19 is added.

No new matter is added.

Claims 7-19 remain in the case.

Applicant requests reconsideration and allowance of the claims in light of the above amendments and following remarks.

Specification Objections

The specification stands objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). In particular, the Examiner states that the Specification does not provide proper antecedent basis for the limitation "the second dose being less than the first dose".

As suggested by the Examiner, the specification is amended to include this limitation. No new matter is added. Thus, the objection to the specification is now overcome.

Claim Objections

Claims 9-10 are objected to because of the following informalities: the claims recite: "oxygen ion injecting process is implemented with 320₂+".

The language "320₂+" has been replaced with the term "ionized oxygen" to clarify the patentable subject matter.

The objections to claims 9-10 are overcome.

Claim Rejections – 35 USC § 103

Claims 7, 9, 11-13, and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,232,201 to Yoshida et al. ("Yoshida") in view of U.S. Patent No 5,930,643 to Sadana et al. ("Sadana").

Claims 8 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida and Sadana as applied to claims 7, 9, 11-13, and 17-18 above, and further in view of G.B. Patent No. 2,309,587A Kim et al. ("Kim").

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida and Sadana as applied to claims 7, 9, 11-13, and 17-18 above, and further in view of "Characterization of low energy SIMOX (les) structures" F. Namavar et al. ("F. Namavar et al.").

The rejections are respectfully traversed.

Claim 7 is amended to recite:

"forming a sacrificial blocking layer pattern on a silicon substrate, the sacrificial blocking layer pattern defining and covering an active region;

introducing first oxygen ions at a first energy and at a first dose into a surface of said silicon substrate using said sacrificial pattern as a mask." The support for the limitations can be found in, for example, FIG. 3B and the accompanying text.

In contrast, in Yoshida, a buried oxide film 2 is formed *without* using a sacrificial blocking layer pattern. See col. 9, lines 46-55 and FIG. 1 of Yoshida. Thus, the Yoshida reference does not teach or suggest, "forming a sacrificial blocking layer pattern on a silicon substrate, the sacrificial blocking layer pattern defining and covering an active region," as recited in claim 7 of the instant application.

Also, in Kim, an active region AA is rather exposed by the sacrificial layer pattern 2, *not covered* by the sacrificial layer pattern 2. Thus, Kim also does not teach the above limitations of claim 7, for example, "forming a sacrificial blocking layer pattern...covering an active region." Compare FIG. 3B of the instant application with FIG. 3A-3B and the specification at page 8, lines 4-13 of the Kim reference.

Thus, the cited references, either alone or in combination, do not teach or suggest all of the limitations of claim 7. Accordingly, the rejection does not present a *prima facie* case of obviousness. Thus, the rejection of claim 7 under 35 U.S.C 103 is improper.

Therefore, claim 7 should now be in condition for allowance and claims 8-18 which depend therefrom and recite features that are neither taught nor disclosed in the cited references, are also allowable.

In addition, new claim 19 recites, "the first oxygen-ion-injected region comprises a first portion and a second portion, the first portion formed below the active region and the second portion adjacent the first portion, and wherein the second portion is formed deeper than the first portion."

On the contrary, Kim teaches the opposite of the above structure recited in claim 9 of the instant application." See FIG. 3B of the Kim reference. In Kim, the portion below the active region is formed deeper than the other portions of the implantation region 3.

For the above reasons, new claim 19 is also allowable.

For the foregoing reasons, reconsideration and allowance of claims 7-19 of the application as amended is solicited. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.



20575

PATENT TRADEMARK OFFICE

Respectfully submitted,

MARGER JOHNSON & McCOLLOM, P.C.

Alan T. McCollom
Reg. No. 28,881

MARGER JOHNSON & McCOLLOM
1030 SW Morrison Street
Portland, OR 97205
(503) 222-3613

FAX RECEIVED

JUL 10 2003

TECHNOLOGY CENTER 2800